

~~9/16/2003~~ 09/16/2003  
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Appl. No. 10/662,358  
Amendment Under 37 CFR 1.116

Feb 17, 2008

### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

#### LISTING OF CLAIMS:

Claims 1-5. (canceled).

6. (currently amended) A ~~bacteria~~-bacterium transformed with a recombinant vector comprising a polynucleotide encoding amino acids 1 to 681 of SEQ ID NO:1, wherein said ~~bacteria~~-bacterium lacks a functional *fadB* gene, and wherein said ~~bacteria~~-bacterium comprises a polyhydroxyalkanoate (PHA) synthase gene.

7. (currently amended) The ~~bacteria~~-bacterium according to Claim 6, wherein the ~~recombinant vector comprises the~~ PHA synthase gene is carried by a vector.

8. (currently amended) The ~~bacteria~~-bacterium according to Claim 6, wherein the PHA synthase gene is *phaC*.

9. (currently amended) A method for producing middle-chain-length polyhydroxy-alkanoate (MCL-PHA), which comprises:

(i) culturing the ~~bacteria~~-bacterium according to Claim 6 in a medium containing a C6-10 carbon source ~~under conditions promoting production of~~ to produce MCL-PHA; and

(ii) recovering MCL-PHA consisting of monomers with 6-10 carbon atoms from the ~~bacteria~~-bacterium of (i).

10. (currently amended) MCL-PHA produced by the method according to Claim 9 ~~under conditions such that~~ in which 3-hydroxyoctanoate (3HO) monomers and 3-

hydroxydecanoate (3HD) monomers in the MCL-PHA produced each ~~comprise~~ account for more than 30% of monomers ~~comprising~~ contained in the MCL-PHA produced.

11. (currently amended): The ~~bacteria~~ bacterium according to Claim 6, wherein the PHA synthase gene is integrated into a chromosome of the ~~bacteria~~ bacterium.

12. (currently amended): The ~~bacteria~~ bacterium according to Claim 6, wherein said ~~bacteria~~ bacterium lacks a functional, endogenous *maoC* gene.

13. (currently amended): The ~~bacteria~~ bacterium according to Claim 6, wherein said ~~bacteria~~ bacterium is *E. coli*.

14. (currently amended): The ~~bacteria~~ bacterium according to Claim 6, wherein said ~~bacteria~~ bacterium is a *fadB* deletion mutant.